AD-A272 126



July 1993

Promoting Freight Carrier EDI Participation with the Defense Finance and Accounting Service – Indianapolis Center

DFI01RD1



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Prepared pursuant to Department of Defense Contract MDA903-90-C-0006. The views expressed here are those of the Logistics Management Institute at the time of issue but not necessarily those of the Department of Defense. Permission to quote reproduce any part except for Government purposes must be obtained from the Logistics Management Institute.

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Executive Summary

PROMOTING FREIGHT CARRIER EDI PARTICIPATION WITH THE DEFENSE FINANCE AND ACCOUNTING SERVICE – INDIANAPOLIS CENTER

By the end of January 1994, the Defense Finance and Accounting Service – Indianapolis Center (DFAS-IN) will be ready to receive freight shipment and invoice information electronically from DoD shipping activities and freight carriers that are capable of sending such information. The success of the electronic system depends largely on two conditions:

- The implementation of electronic data interchange (EDI) at the six high-volume shipping depots of the Defense Logistics Agency (DLA) and three Army regional data centers known as Multifunctional Information Processing Activities (MIPAs) that house the EDI translation software and process EDI transactions for their corresponding satellite aepots
- The availability of EDI-capable motor freight carriers to serve as DFAS-IN's trading partners.

Insofar as implementation of EDI at DLA and Army depots is concerned, it is proceeding apace. The six DLA depots are scheduled to complete their EDI implementation by the end of January 1994 and the three Army MIPAs by late May 1994. The process of determining the availability of EDI-capable motor carriers is also proceeding. In this report, we propose a three-step plan for soliciting freight carrier trading partners for DFAS-IN. First, we have prepared promotional and instructional materials and recommend their widespread distribution throughout the industry; second, we suggest a series of freight carrier workshops; and third, we propose a process of selectively targeting carriers that represent large shipment volumes. We recommend that DFAS-IN develop a process to test interested carriers' EDI qualifications prior to accepting electronic invoices for payment and that DFAS-IN conduct that process using the "first-come, first-served" service approach.

With the implementation of DLA and Army EDI plans and persistent, aggressive solicitation of the freight carrier industry, DFAS-IN can expect that 50 percent of all freight shipment information and 40 percent of all invoice

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information will be transmitted to it electronically within 6 months of initial EDI implementation.

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PROMOTING FREIGHT CARRIER EDI PARTICIPATION WITH THE DEFENSE FINANCE AND ACCOUNTING SERVICE – INDIANAPOLIS CENTER

INTRODUCTION

Each year the Defense Finance and Accounting Service — Indianapolis Center (DFAS-IN) receives over a million bills from freight carriers, generating several million pieces of paper. To eliminate the costs associated with handling that much paper, it is implementing the Defense Transportation Payment System (DTRS). DTRS will make extensive use of electronic data interchange (EDI) techniques to enhance its payment, collection, accounting, and reporting functions as well as to eliminate paper. It will receive freight government bills of lading (GBLs) and shipment cost data electronically from EDI-capable shipping activities through an EDI interface with Military Traffic Management Command's (MTMC's) CONUS Freight Management (CFM) system. In addition, DFAS-IN will receive electronic invoice information from EDI-capable carriers and match that information to the prepositioned electronic shipment information for reconciliation and payment.

The DFAS-IN is interested in attracting freight carriers to be EDI trading partners as quickly as possible. We have developed and are implementing a plan to accomplish that goal. The plan calls for developing program materials, conducting general carrier workshops, and soliciting specific carriers for initial implementation of DTRS. Both the materials and the workshops are designed to introduce freight carriers to EDI and to DoD's operating concept and to explain what carriers must do to become DFAS-IN trading partners. By targeting specific carriers, DFAS-IN can be assured of having high-volume carriers qualified to transmit electronic invoices when DTRS goes into production.

In the next section, we estimate the volume of EDI invoices that DFAS-IN can expect. Since DFAS-IN is limiting EDI invoices to shipments originating at EDI-capable shipping activities, our projections are based on the Defense Logistics Agency (DLA's) and the Army's plans for implementing EDI at their shipping activities and on the EDI capability of carriers.

EDI PROJECTIONS FOR DEAS-IN

In a previous study, we found that 85 percent (1.1 million) of the total 1.3 million annual CONUS freight shipments are transported by motor carriers, 12 percent (0.2 million) by air freight carriers, 2 percent (20,000) by rail carriers, and 1 percent by others. Those statistics remain relatively constant from year to year. In the same study, we found that DLA is the predominant DoD shipper, with 34 percent of the total (45 percent if we include the Defense Contract Administration Service's shipping), followed by the Army with 24 percent, the Air Force with 17 percent, the Navy with 12 percent, and the Marine Corps with 2 percent.

The current DFAS-IN plan focuses on carriers that have transported DLA and Army freight in the recent past. We concentrated on those carriers because DLA and Army EDI plans for shipping activities are more mature than those of the Air Force; DLA and Army represent significantly more EDI shipment potential than the Navy or the Marine Corps; and DFAS-IN's system, which will be needed to process Navy and Marine Corps bills under payment center consolidation plans, is currently capable of processing only DLA, Army, and Air Force bills.

The DLA and Army plan to implement EDI at their largest depots. They are targeting activities that account for 56 percent (618,000 shipments) of DFAS-IN's current total annual freight shipments (about 1.1 million shipments). From March 1991 through February 1992, EDI-capable carriers were involved in about 45 percent (490,000 shipments) of DFAS-IN's total freight business. Almost all of those shipments are by motor carriers because although rail carriers are EDI capable, their shipment volume is insignificant and few air freight carriers are EDI capable. The DLA's and Army's EDI plans are detailed below.

DLA EDI Implementation Plan and Schedule

The DLA is currently implementing EDI at six of its depot shipping activities and plans to add two Army depots now being consolidated under DLA management. The six DLA depots account for about 40 percent (435,000 shipments) of the freight GBLs paid each year by the DFAS-IN; the two Army depots will account for another

¹LMI Report AL711R1, An Electronic Future for Defense Transportation Management, Thomas W. Heard and W. Michael Bridges, January 1988.

8 percent. As a result, implementation of EDI at the DLA depots is key to the success of DoD's EDI transportation payment program.

The DLA has procured commercial EDI translation software packages for its depots and has developed a pilot system at the Defense Depot Ogden, Utah (DDOU). (DDOU was selected as the pilot activity because it is collocated with DLA's central design agency.) DDOU began testing the pilot system in February 1992 by exchanging information electronically with the CFM system.

In August 1993, the EDI pilot system at DDOU will make the transition to a full-scale production operation, and DDOU will then begin to export the pilot system to the other five depots in 1-month increments. Sharpe Army Depot, Cal., will eventually be consolidated with Defense Depot Tracy, Cal., and New Cumberland Army Depot, Pa., will eventually be consolidated with Defense Depot Mechanicsburg, Pa. Figure 1 shows the EDI implementation schedule at the six DLA depots between June 1993 and February 1994. Current plans call for an EDI capability at Sharpe Army Depot and New Cumberland Army Depot following the DLA depot implementation.

	Depot		1993						1994	
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
1.	Defense Depot Ogden, Utah				•					
2.	Defense Depot Columbus, Ohio					•			}	
3.	Defense Depot Tracy, Cal.						•			
4.	Defense Depot Memphis, Tenn.							•		
5.	Defense Depot Richmond, Va.	1							ļ	
6.	Defense Depot Mechanicsburg, Pa.									•
7.	Sharpe Army Depot, Cal.								Unsche	duled
8.	New Cumberland Army Depot, Pa.								Unsche	

FIG. 1. DLA EDI IMPLEMENTATION SCHEDULE

Most of the carriers that serve the eight depots are large, less-than-truckload motor carriers that are able to use EDI to conduct business. EDI-capable carriers

that serve the six DLA depots will account for about 30 percent (339,000 shipments) of the freight invoices paid by DFAS-IN. Another 8 percent will be added by Sharpe Army Depot and New Cumberland Army Depot invoices.

Table 1 shows the largest carriers at each DLA depot and their GBL volumes from March 1991 through February 1992. At each depot, 12 or fewer carriers accounted for more than 90 percent of the GBL volume. About 70 percent of DLA's shipments were guaranteed traffic (GT) shipments. DLA plans to focus its EDI efforts initially on GT shipments and by August 1993 expects carriers of all freight shipments to be EDI capable. Although most GT contracts will end in 1993, future awards will likely include many of the same carriers identified in Table 1. Table 2 presents the 20 largest carriers at the eight depots. Those carriers account for over 85 percent of DLA's freight shipments, almost all are EDI capable, and they include DLA's largest GT carriers.

Army EDI Implementation Plan and Schedule

An Army initiative, Streamlining Information Services Operations Consolidation System (SISOCS), will provide better control of business data and improved utilization of information system resources. It will do so by integrating and consolidating the Army Materiel Command major subordinate command data-processing environment (now 49 mainframe computers at 22 different locations) into four regional data centers known as Multifunctional Information Processing Activities (MIPAs). The four consolidation MIPA hubs are Chambersburg, Pa.; Rock Island, Ill.; Huntsville, Ala.; and St. Louis, Mo.

Three MIPA hubs (Chambersburg, Rock Island, and Huntsville) will house the EDI translation software and process EDI transactions for their corresponding satellite depots. The St. Louis MIPA hub does not have shipping depot communications connectivity and thus will not house the EDI translator nor have EDI processing capability. The two Army depots are to be consolidated into DLA and are not included in the configurations.

The SISOCS initiative enables the Army to implement EDI quickly. The MIPA hubs house the mainframe computers with identical EDI systems. Therefore, once EDI implementation is complete at one hub, the other two can easily be added by installing a copy of the system software on each mainframe and conducting the EDI

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TABLE 1

DLA TRAFFIC PROFILE

(March 1991 – February 1992)

Depot (GBLOC) ^a / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
Ogden, Utah (KASQ)	Consolidated Freightways	13,862	33.9	12,511	30.6	yes
	Overnite Transportation	13,001	31.8	11,701	28.6	yes
	Clearwater Trucking	5,977	14.6	5,223	12.8	yes
	Yellow Freight System	1,994	4.9	1,771	4.3	yes
	Molerway Freight Lines	1,398	3.4	1,225	3.0	no
	Motor Cargo	606	1.5	507	1.2	no
40,901		36,838	90.1	32,938	80.5	
Columbus, Ohio (EISQ)	Carolina Freight Carriers	12,699	30.8	12,214	29.6	yes
	Western New York Air Freight	8,183	19.9	677	1.6	no
	Overnite Transportation	6,283	15.2	6,022	14.6	yes
	Consolidated Freightways	5,652	13.7	5,528	13.4	yes
	Hover Trucking Co.	2,041	5.0	1,959	4.8	yes
	ANR Freight Systems	1,811	4.4	1,746	4.2	no
	ABF Freight System, Inc.	949	2.3	906	2.2	yes
41,213		37,618	91.3	29,052	70.5	
Tracy, Cal. (LHSQ)	Yellow Freight System	40,940	54.3	34,130	45.2	yes
	Conway Express	8,354	11.1	7,046	9.3	yes
	Consolidated Freightways	5,578	7.4	4,234	5.6	yes
	Associated Air Freight	2,678	3.6	0	0	no

^a GBLOC = government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 1

DLA TRAFFIC PROFILE

(March 1991 – February 1992) (Continued)

Depot (GBLOC) ^a / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
	Dynamic Air Freight	1,831	2.4	0	0	no
	Jess Cervantes	2,186	2.9	1,442	1.9	no
	Clearwater Trucking	2,067	2.7	1,683	2.2	yes
	General Transportation	1,691	2.2	1,331	1.8	no
	Airborne Freight	1,549	2.1	0	0	yes
	Americargo	1,241	1.6	1,225	1.6	no
75,435		68,115	90.3	51,091	67.8	
Memphis, Tenn. (FDSQ)	Roadway Express, Inc.	23,149	20.0	19,980	17.3	yes
	Overnite Transportation	16,467	14.2	11,167	9.7	yes
	Consolidated Freightways	12,336	10.7	8,365	7.2	yes
	Spartan Express, Inc.	9,199	8.0	8,360	7.2	yes
	Transus, Inc.	7,338	6.3	6,653	5.8	yes
	Batesville Truck Lines	7,330	6.3	6,611	5.7	no
	Conway Express	7,132	6.2	5,014	5.2	yes
	Jones Truck Lines	6,461	5.6	5,254	4.5	yes
	Hover Trucking Co.	4,299	3.7	3,903	3.4	yes
	Western New York Air Freight	3,994	3.5	218	0.2	no
	AFC Express	3,816	3.3	66	0	no
	Old Dominion Freight Line	3,420	3.0	3,211	2.8	yes
115,586	· · · · · · · · · · · · · · · · · · ·	104,941	90.8	79,802	69.0	

^a GBLOC = government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 1

DLA TRAFFIC PROFILE

(March 1991 – February 1992) (Continued)

Depot (GBLOC) ^a / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
Richmond, Va. (BJSQ)	Carolina Freight Carriers	21,277	31.2	17,082	25.0	yes
	St. Johnsbury Trucking	11,587	17.0	9,380	13.8	yes
	Estes Express Lines	9,643	14.1	8,486	12.4	no
	Preston Trucking	7,303	10.7	4,982	7.3	yes
	Old Dominion Freight Line	5,006	7.3	4,399	6.5	yes
	Overnite Transportation	3,966	5.8	3,293	4.8	yes
	Carroll Trucking	2,859	4.2	272	0.4	no
68,233		61,641	90.3	47,894	70.2	
Mechanicsburg, Pa. (DMSQ)	Carolina Freight Carriers	34,019	36.2	32,681	34.8	yes
	Consolidated Freightways	18,798	20.0	14,850	15.8	yes
	Ward Trucking	9,470	10.1	8,478	9.0	yes
	St. Johnsbury Trucking	8,974	9.6	8,270	8.8	yes
	ABF Freight System, Inc.	7,654	8.2	1	0	yes
	Preston Trucking	4,087	4.3	198	0.2	yes
	Old Dominion Freight Line	3,032	3.2	2,913	3.1	yes
93,915		86,034	91.6	67,391	71.8	
Sharpe, Cal. (LEAQ)	Yellow Freight System	13,909	52 2	428	1.6	yes
	Consolidated Freightways	2,520	9.5	1,131	4.2	yes
	Dynamic Air Freight	2,029	7.6	335	1.3	no
	Conway Express	1,137	4.3	2	0	yes

^a GBLOC = government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 1

DLA TRAFFIC PROFILE

(March 1991 – February 1992) (Continued)

Depot (GBLOC) ² / total ship:nents	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
	Clearwater Trucking	1,082	4.1	76	0.3	yes
	Emery Worldwide	1,042	3.9	992	3.7	yes
	J&S Trucking Co.	947	3.6	900	3.4	no
	Jess Cervantes	655	2.5	111	0.4	no
	Convenant Transport, Inc.	579	2.2	561	2.1	no
26,651		23,900	89.7	4,536	17.0	
New Cumberland, Pa. (DNAQ)	Roadway Express, Inc.	22,138	35.0	21,571	34.1	yes
	Carolina Freight Carriers	16,032	25.4	15,589	24.7	yes
	Overnite Transportation	7,408	11.7	6,777	10.7	yes
	Pennco Trucking	3,197	5.1	3,160	5.0	no
	Consolidated Freightways	2,523	4.0	2,404	3.8	yes
	St. Johnsbury Trucking	2,132	3.4	2,090	3.3	yes
	Western New York Air Freight	2,001	3.2	1,972	3.1	no
	Fulton, Authur H.	1,062	1.7	1,053	1.7	no
	Ward Trucking	951	1.5	927	1.5	yes
63,197		57,444	90.1	55,543	87.9	
Grand total 525,131		476,531	91.0	368,247	70.1	

a GBLOC = government bill of lading office code.

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^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 2

DLA'S 20 LARGEST FREIGHT CARRIERS

(Including Sharpe and New Cumberland Army Depots)

(March 1991 — February 1992)

Carrier	Total shipments	GT shipments	EDI capabilitya
Carolina Freight Carriers	84,027	77,566	yes
Consolidated Freightways	61,269	49,023	yes
Yellow Freight System	56,843	36,329	yes
Overnite Transportation	47,125	38,960	yes
Roadway Express, Inc.	45,287	41,551	yes
St. Johnsbury Trucking	22,693	19,740	yes
Conway Express	16,623	13,062	yes
Western New York Air Freight	14,178	2,867	no
Old Dominion Freight Line	11,458	10,523	yes
Preston Trucking	11,390	5,180	yes
Ward Trucking	10,421	9,405	yes
Estes Express Lines	9,643	8,486	no
Spartan Express, Inc.	9,199	8,360	yes
Clearwater Trucking	9,126	6,982	yes
ABF Freight System, Inc.	8,603	907	yes
Transus, Inc.	7,338	6,653	yes
Batesville Trucking	7,330	6,611	no
Jones Truck Lines	6,461	5,254	yes
Hover Trucking Co.	6,340	5,862	yes
Dynamic Air Freight	3,860	335	no
Total	449,216	353,756	

^a Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

training and new procedures training at each satellite location. That training is expected to take approximately 2 weeks.

The first MIPA hub scheduled for EDI implementation is Chambersburg. Letterkenny Army Depot, Pa., where the maintenance is housed, is currently testing an EDI pilot system. After that prototype is complete, EDI will be implemented and

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training conducted at the other satellites of this hub - Tobyhanna Army Depot, Pa.; Seneca Army Depot, N.Y.; Savanna Army Depot, Ill.; and Lake City Army Ammunition Plant, Mo.

The MIPA at Huntsville will be implemented next. It is scheduled next because one of its satellites, the Red River Army Depot, Tex., has by far the largest volume of shipments of any depot, and by implementing the Huntsville hub next, the Army will maximize EDI benefits sooner. Other Huntsville satellite activities include Anniston Army Depot, Ala.; Lexington Bluegrass Army Depot, Ky.; Rock Island Arsenal, Ill.; Redstone Army Depot, Ala.; and Corpus Christie Army Depot, Tex.

The Rock Island hub will be the third to have EDI capability. Satellite activities within Rock Island's configuration include Sacramento Army Depot, Cal.; McAlister Army Ammunition Depot, Ok.; Pueblo Army Depot, Col.; Sierra Army Depot, Cal.; Hawthorne Army Ammunition Depot, Nev.; Crane Army Ammunition Plant, Ind.; Tooele Army Depot, Utah.; Pine Bluff Arsenal, Ark.; and Navajo Depot Activity, Ariz. Figure 2 presents the probable EDI implementation schedule for Army hubs.

Hub	1993				1994					
Hub	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1. Chambersburg										
2. Huntsville										
3. Rock Island										

FIG. 2. ARMY EDI IMPLEMENTATION SCHEDULE

By May 1994, the shipping activities that the Army is targeting for EDI capability will account for almost 100,000 shipments annually, which is about 8 percent of DFAS-IN's total freight shipments. Tables 3, 4, and 5 show the largest carriers that served the largest Army activities planned for EDI capability between March 1991 and February 1992. More than 80 percent of the total shipments were transported by 15 or fewer carriers at each depot. Carriers that served the larger Army activities were able to transmit electronic invoices for about 70 percent of the

Army's shipments, representing over 6 percent of DFAS-IN's total invoices paid annually. Reliable historical data are not available on the smaller satellite activities that fall under the hub configuration, and hence, those activities are not included in Tables 3, 4, and 5.

TABLE 3

ARMY TRAFFIC PROFILE — CHAMBERSBURG HUB

(March 1991 — February 1992)

Depot (GBLOC) ^a / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
Letterkenny, Pa. (DMAQ)	Consolidated Freightways	2,865	24.4	272	2.3	Yes
	Overnite Transportation	1,373	11.7	432	3.7	Yes
	St. Johnsbury Trucking	1,139	9.7	291	2.5	Yes
	Preston Trucking	936	8.0	14	0.1	Yes
	Old Dominion Freight Line	848	7.2	218	1.9	Yes
	Yellow Freight System	444	3.8	0	0	Yes
	C. I. Whitten Transfer Co.	436	3.7	0	0	No
	Cressler	390	3.3	17	0.1	No
	T. F. Boyle Transportation	340	2.9	0	0	Yes
	Estes Express Lines	302	2.6	0	0	No
	Tri-State Motor Transit	277	2.4	0	0	Yes
	ABF Freight System, Inc.	241	2.1	0	0	Yes
11,735		9,591	81.7	1,244	10.6	
Tobyhanna, Pa. (DOAQ)	Roadway Express, Inc.	1,321	22.9	0	0	Yes
	Consolidated Freightways	809	14.0	0	0	Yes
	Ward Trucking	581	10.1	10	0.2	Yes
	Overnite Transportation	507	8.8	1	0	Yes

a GBLOC = government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 3

ARMY TRAFFIC PROFILE - CHAMBERSBURG HUB (Continued)

(March 1991 - February 1992)

Depot (GBLOC) ^a / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
	Emery Worldwide	557	9.7	0	0	Yes
	Pilot Air Freight	399	6.9	0	0	No
	Pre Fab Transit	357	6.2	0	0	No
	Yellow Freight System	296	5.1	0	0	Yes
5,771		4,827	83.6	11	0.2	
Seneca, N.Y. (DCAQ)	Howards Express	366	15.0	0	0	Yes
	Roadway Express, Inc.	269	11.0	0	0	Yes
	Carolina Freight Carriers	241	9.9	0	0	Yes
	ABF Freight System, Inc.	205	8.4	0	0	Yes
	Ranger Transportation	180	7.4	0	0	Yes
	Consolidated Freightways	167	6.8	0	0	Yes
	Tri-State Motor Transit	148	6.1	0	0	Yes
	C. I. Whitten Transfer Co.	148	6.1	0	0	No
	T. F. Boyle Transportation	133	5.5	0	0	Yes
	New England Motor Freight	77	3.2	0	0	No
	Three Coast Carriers	67	2.7	0	0	No
2,441		2,001	82.0	0	0	
Chambersburg total 19,947		16,419	82.3	1,255	6.3	

a GBLOC ≈ government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 4

ARMY TRAFFIC PROFILE — HUNTSVILLE HUB

(March 1991 — February 1992)

Depot (GBLOC) ^a / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
Red River, Tex. (HBAQ)	Consolidated Freightways	17,646	38.1	0	0	Yes
	Yellow Freight System	7,894	17.1	0	0	Yes
	Overnite Transportation	4,436	9.6	0	0	Yes
	Arkansas Freightways	3,822	8.3	0	0	Yes
	Central Freight Lines	3,140	6.8	0	0	Yes
	Roadway Express, Inc.	2,944	6.4	0	0	Yes
46,267		39,882	86.2	0	0	
Anniston, Ala. (FGAQ)	Baggett Transportation	1,307	16.1	0	0	No
	Tri-State Motor Transit	925	11.4	0	0	Yes
	Ranger Transportation	756	9.3	0	0	Yes
	Roadway Express, Inc.	750	9.2	0	0	Yes
	Watkins Motor Lines	726	8.8	0	0	Yes
	Transus, Inc.	599	7.4	0	0	Yes
	Overnite Transportation	469	5.8	0	0	Yes
	ABF Freight System, Inc.	418	5.1	0	0	Yes
	Carolina Freight Carriers	417	5.1	0	0	Yes
	T. F. Boyle Transportation	416	5.1	0	0	Yes
8,129		6,783	83.4	0	0	

^a GBLOC = government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 4

ARMY TRAFFIC PROFILE - HUNTSVILLE HUB (Continued)

(March 1991 - February 1992)

Depot (GBLOC)a/ total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
Lexington Bluegrass, Ky. (FAAQ)	Roadway Express, Inc.	1,526	18.8	0	0	Yes
	Carolina Freight Carriers	1,020	12.5	0	0	Yes
	Tri-State Motor Transit	811	10.0	0	0	Yes
	Consolidated Freightways	625	7.7	0	0	Yes
	C. I. Whitten Transfer Co.	597	7.3	0	0	No
	Mercer Transportation	472	5.8	0	0	Yes
	Universal Transportation	342	4.2	0	0	No
	T. F. Boyle Transportation	292	3.5	0	0	Yes
	Emery Worldwide	242	3.0	0	0	Yes
	Northwest Transport Service	194	2.4	0	0	Yes
	Baggett Transportation	182	2.2	1	0	No
	McGil Specialized Carriers	179	2.2	0	0	Yes
8,130		6,482	79.7	1	0	
Huntsville total 62,526		53,147	85.0	1	0	

^a GBLOC = government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 5

ARMY TRAFFIC PROFILE ~ ROCK ISLAND HUB

(March 1991 — February 1992)

Depot (GBLOC) ^a / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
Sacramento, Ca. (LGAQ)	Consolidated Freightways	741	15.4	5	0.1	Yes
	Yellow Freight System	676	14.1	0	0	Yes
	G. I. Trucking	512	10.7	0	0	Yes
	Danzas – Northern Air	485	10.1	0	0	No
	Condor Freight Lines	344	7.1	0	0	No
	Universal Transportation	337	7.0	0	0	No
	Conway Express	217	4.5	1	0	Yes
	Viking Freight System	204	4.2	0	0	Yes
	Profit By Air	191	4.0	0	0	No
	Delta Air	165	3.4	0	0	Yes
4,809		3,872	80.5	6	0.1	
McAlister, Okla. (HOAM)	Tri-State Motor Transit	488	19.9	0	0	Yes
	Federal Express	312	12.7	0	0	Yes
	L. D. Conner Trucking	191	7.8	0	0	No
	Coast Countries Express	163	6.7	0	0	No
	Wilson Transfer Special	138	5.6	0	0	No
	ABF Freight System, Inc.	114	4.7	0	0	Yes
	Consolidated Freightways	107	4.4	0	0	Yes
	Pre Fab Transit	80	3.3	0	0	No
	Baggett Transportation	79	3.2	0	0	No

^a GBLOC = government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 5

ARMY TRAFFIC PROFILE — ROCK ISLAND HUB (Continued)

(March 1991 — February 1992)

Depot (GBLOC) ² / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
	Federal Freight Systems	63	2.6	0	0	No
	Farley, Tony	63	2.6	0	0	No
	C. I. Whitten Transfer Co.	62	2.5	0	0	No
	Union Pacific Railroad	61	2.5	0	0	Yes
	Yellow Freight System	60	2.4	0	0	Yes
2,450		1,981	80.9	0	0	
Pueblo, Col. (KIAQ)	Federal Express	253	15.1	0	0	Yes
	Roadway Express, Inc.	206	12.3	0	0	Yes
	Yellow Freight System	157	9.4	0	0	Yes
	Tri-State Motor Transit	113	6.7	0	0	Yes
	Northwest Transport Service	106	6.3	0	0	Yes
	C. I. Whitten Transfer Co.	88	5.3	0	0	No
	Consolidated Freightways	72	4.3	0	0	Yes
	T. F. Boyle Transportation	57	3.4	0	0	Yes
	Independent Freightway	43	2.6	0	0	No
	Baggett Transportation	42	2.5	0	0	No
	Arrow Trucking	41	2.4	0	0	No
	Ranger Transportation	41	2.4	1	0.1	Yes

^a GBLOC = government bill of lading office code.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 5

ARMY TRAFFIC PROFILE - ROCK ISLAND HUB (Continued)

(March 1991 - February 1992)

Depot (GBLOC) ^a / total shipments	Carrier	Shipments	% of total depot shipments	GT shipments	% of total depot GT shipments	EDI cap- ability ^b
	Schneider Specialized	39	2.3	18	1.1	Yes
	Knox Truck Lines	35	2.1	0	0	No
	Three Coast Carriers	35	2.1	0	0	No
1,674		1,328	79.3	19	1.1	
Sierra, Cal. (LDAQ)	Diable Transportation	286	20.0	0	0	No
	Tri-State Motor Transit	213	14.9	0	0	Yes
_	Consolidated Freightways	188	13.1	6	0.4	Yes
	Ranger Transportation	171	11.9	3	0.2	Yes
	Baggett Transportation	102	7.1	0	0	No
	C. I. Whitten Transfer Co.	88	6.2	0	0	No
	T. F. Boyle Transportation	75	5.2	0	0	Yes
	Knox Truck Lines	45	3.1	0	0	No
1,432		1,168	81.6	9	0.6	
Rock Island total 10,365		8,349	80.6	34	0	

[•] GBLOC = government bill of lading office code.

Table 6 presents the Army's 20 largest carriers. Those 20 carriers represented 78 percent of the Army's depot shipment volume, and all but 3 are EDI capable. Guaranteed traffic volume for those Army depots has been insignificant in the past but is expected to change as more Army depots are transferred to DLA management.

^b Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

TABLE 6

ARMY'S 20 LARGEST FREIGHT CARRIERS

(March 1991 — February 1992)

Carrier	Total shipments	EDI cap- ability ^a
Consolidated Freightways	23,220	Yes
Yellow Freight System	9,527	Yes
Roadway Express, Inc.	7,016	Yes
Overnite Transportation	6,785	Yes
Arkansas Freightways	3,822	Yes
Central Freight Lines	3,140	Yes
Tri-State Motor Transit	2,975	Yes
Baggett Transportation	1,712	No
Carolina Freight Carriers	1,678	Yes
C. I. Whitten Transfer Co.	1,419	No
T. F. Boyle Transportation	1,313	Yes
Ranger Transportation	1,148	Yes
St. Johnsbury Trucking	1,139	Yes
ABF Freight System, Inc.	978	Yes
Preston Trucking	936	Yes
Old Dominion Freight Line	848	Yes
Emery Worldwide	799	Yes
Watkins Motor Lines	726	Yes
Universal Transportation	679	No
Federal Express	565	Yes
Total	70,425	_

^a Carriers with EDI capability claim to be able to send or receive at least one ANSI ASC X12 transaction set, not necessarily invoice or shipment information transaction sets.

DFAS-IN EDI Implementation Plan and Schedule

The DFAS-IN is promoting a plan that focuses initially on DoD's freight transportation. That plan depends on the ability of DoD shippers and freight carriers to transmit shipment and invoice information to DFAS-IN electronically. Assuming that DLA and Army shippers are able to implement their EDI plans described earlier

and that DFAS-IN continues aggressive promotion of the carrier industry as described in the next section, DFAS-IN will be receiving more than 40 percent of its freight shipment information and more than 30 percent of its invoice information electronically by the time it implements DTRS in January 1994. Table 7 shows DFAS-IN's projected EDI volumes for freight transportation. If Sharpe Army Depot and New Cumberland Army Depot figures were included in Table 7, DFAS-IN would receive 56 percent of freight shipment information electronically and electronic freight invoice information would be as high as 45 percent.

FREIGHT CARRIER IMPLEMENTATION PLAN

In the previous section, we showed that 45 percent of all carrier invoices for shipments originating at EDI-capable shipping activities planned for DLA and the Army will be generated by EDI-capable carriers. The objective of our plan is to make it easy for those carriers to become DFAS-IN EDI trading partners. Our plan has three components: promotional and instructional materials for carriers, general freight carrier workshops, and target solicitation.

Carrier Materials

The following materials have been developed and are available to freight carriers:

- LMI Report DF101LN9, Doing Business with DoD Using Electronic Data Interchange An Information Package for Freight Carriers, W. Michael Bridges and Theresa Yee, March 1993.
- Freight Carrier Billing Instructions for the Defense Finance and Accounting Service Indianapolis Center, published by and available from Transportation Operations, DFAS-IN.
- LMI Report PL205LN4, EDI Trading Partner Agreement for Defense Transportation: Freight, W. Michael Bridges, Harold L. Frohman, William R. Ledder and Theresa Yee, March 1993.
- LMI Report PL205LN1, DoD Electronic Data Interchange (EDI) Convention - ASC X12 Transaction Set 858 Freight Government Bill of Lading Shipment Information (Version 003010), February 1993.
- LMI Report DF101LN2, DoD Electronic Data Interchange (EDI) Convention ASC X12 Transaction Set 859 Generic Freight Invoice (Version 003020), April 1993.

TABLE 7

PROJECTED DFAS-IN EDI VOLUMES FOR FREIGHT TRANSPORTATION

A	1993						
Activity	Aug	Sep	Oct	Nov	Dec		
DLA activity	Ogden	Columbus	Tracy	Memphis	Richmond		
GBLs (000)	41	41	75	116	68		
Invoices (000)	35	28	58	90	49		
Army activity					Chambersburg		
GBLs (000)					20		
Invoices (000)				1	14		
Total							
GBLs (000)	41	41	75	116	88		
Invoices (000)	35	28	58	90	63		
Accum. % of DFAS-IN total freight GBLs							
GBLs (000)	4	7	14	25	33		
Invoices (000)	3	6	11	19	25		

Activity	1994						
	Jan	Feb	Mar	Apr	May		
DLA activity GBLs (000) Invoices (000)	Mechanicsburg 94 86						
Army activity GBLs (000) Invoices (000)			Huntsville 63 52		Rock Island 10 5		
Total GBLs (000) Invoices (000)	94 86	0	63 52	0	10 5		
Accum. % of DFAS-IN total freight GBLs GBLs (000) Invoices (000)	41	41 33	47 37	47 37	48 38		

Notes: GBLs — Projected annual shipments generated by EDI-capable DoD shipping activities. Invoices — projected annual shipments generated by EDI-capable DoD shipping activities and invoiced by EDI-capable carriers. Table does not include Sharpe Army Depot and New Cumberland Army Depot.

- LMI Report DF101LN4, DoD Electronic Data Interchange (EDI) Convention ASC X12 Transaction Set 110 Air Freight Invoice (Version 003020), March 1993.
- LMI Report DF101LN6, DoD Electronic Data Interchange (EDI) Convention ASC X12 Transaction Set 210 Motor Carrier Invoice (Version 003020), March 1993.
- LMI Report DF101LN7, DoD Electronic Data Interchange (EDI) Convention ASC X12 Transaction Set 410 Rail Carrier Invoice (Version 003020), March 1993.

The first document listed above, LMI Report DF101LN9, provides guidance to carriers on how to initiate and conduct EDI freight business with DoD. That document provides an overview of EDI, describes the DoD EDI operating concept, introduces standards and DoD conventions, and briefly identifies components necessary to initiate EDI. It is designed to be promotional and does not include detailed instructions. It is the first document that DFAS-IN should send to carriers inquiring about doing EDI business with it. EDI capability is not a prerequisite for the document.

The next document, Freight Carrier Billing Instructions for the Defense Finance and Accounting Service – Indianapolis Center, is a detailed instructional guide. It presents the steps required for becoming a DFAS-IN EDI trading partner and details the electronic invoicing process. It also identifies new requirements for submission of billings using the traditional paper process. DFAS-IN should send it to any carrier that has serious intentions of becoming a DFAS-IN EDI trading partner.

In LMI Report PL205LN4, we prescribe the general procedures and policies to be followed by DoD Components and their commercial trading partners when using EDI to transmit freight shipment or billing information. It also provides the mechanism for trading partners to exchange administrative information that is required by the translation software. The trading partner agreement must be signed by any carrier who wishes to conduct business with DFAS-IN.

In LMI reports DF101LN1, DF101LN2, DF101LN4, DF101LN6, and DF101LN7, we provide conventions for carrier use of public standards when submitting electronic invoices.

In a previous study, we reported that MTMC has assumed the role of Defense Transportation's EDI Trading Partner Administrator.² Part of that role will be to maintain inventory and distribute all of the documents described above with the exception of the billing instructions, which should be DFAS-IN's responsibility.

Freight Carrier Workshops

Carrier workshops present an excellent opportunity to promote EDI trading partners. The information available in the carrier materials can be briefed firsthand, and carriers will have a mechanism to offer feedback and raise questions.

The first freight carrier/DoD EDI invoicing workshop was held on 24 March 1993 in Indianapolis, Ind. Sponsored by DFAS-IN and organized by LMI, the workshop was extremely successful, with over 125 participants, including representatives from 29 motor carriers, 2 rail carriers, 3 air freight carriers, and a host of EDI vendors prepared to serve the industry. Ten of the top 20 carriers that serve DLA and the Army were present, including the top 5: Carolina Freight Carriers, Consolidated Freightways, Yellow Freight Systems, Overnite Transportation, and Roadway Express, Inc. Those 5 carriers alone are responsible for more than 30 percent of DFAS-IN's DLA and Army freight invoices.

The workshop was announced nationally to the freight carrier industry through trade magazines, direct mail, the American Trucking Association (ATA), and the ANSI ASC X12 Transportation Subcommittees.

An announcement promoting the workshop was sent to Traffic World, a magazine with one of the largest exposures to the carrier industry. A letter was sent to the top 100 freight carriers, according to statistics kept by Transportation Operations at DFAS-IN. Rankings were determined based on the number of annual shipments for 1992. The list included the top 20 motor freight carriers that served DLA and Army depots. In addition, the ATA, our country's largest association of motor freight carriers, was contacted and encouraged to place the workshop announcement in its association magazine, Transport Topics. Finally, a letter of invitation was presented to each member of the ASC X12 Motor, Air, and Rail

²LMI Report DF101LN8, Formalizing an EDI Trading Partner Relationship with Freight Transportation Service Providers for the Defense Finance and Accounting Service – Indianapolis Center, W. Michael Bridges and Theresa Yee, May 1993.

Transportation Subcommittees, made up of EDI-capable carriers that work together to maintain transportation EDI standards.

Promotion was not biased with regard to size of carrier or EDI capability. Every carrier representative who expressed interest was accommodated. A complete carrier workshop list, including those who could not attend but expressed interest in DFAS-IN's EDI program, is included in the appendix. This list will become important as carriers are targeted for initial implementation. The list includes points of contact with telephone numbers and addresses and should evolve into DFAS-IN's master list of carriers interested in EDI.

Selective Carrier Targeting

We call the final stage in our carrier implementation plan selective carrier targeting. By the time DFAS-IN completes testing in December 1993, several carriers representing significant shipment volumes should be EDI-qualified and ready to submit electronic invoices. While selective targeting takes place, DFAS-IN must be cautious not to show favoritism toward large EDI-capable carriers. It made two announcements at the workshop that affect selective targeting: first, carriers may submit electronic invoices only for shipments originating from EDI-capable shipping activities, and second, DFAS-IN will qualify carriers for submitting EDI invoices on a first-come, first-served basis. In keeping with those policies, DFAS-IN should distribute a general announcement identifying when it will begin qualifying carriers and accurately identifying dates when various shipping activities will be EDI capable. It should do so as soon as firm dates are known.

About 4 months before DTRS is scheduled to begin production, DFAS-IN should contact all carriers shown in Tables 1, 3, 4, and 5, assuming each shipping activity meets the planned EDI implementation schedule, and solicit their EDI business. DLA's Ogden, Utah, depot is scheduled to be the first EDI-capable shipping activity (see Table 7) and its carriers should be targeted first. According to our plan, DFAS-IN should begin qualifying carriers associated with Ogden around September 1993. That approach has two advantages. DFAS-IN will spread the workload associated with qualifying carriers over several months prior to implementation, carriers will have the time they require to customize their systems to meet DFAS-IN's EDI requirements, and those carriers qualified early will not be inactive for a long time period.

The process of qualifying a carrier for EDI should include completing a trading partner agreement, setting up the trading partner's profile (administrative information) in the translation software, and testing to include the transmission of several electronic invoices to DFAS-IN. The qualification process is described in detail in the billing instructions mentioned previously.

APPENDIX

FREIGHT CARRIER EDI CONTACT LIST

The freight carrier industry is mature with respect to electronic data interchange (EDI) capability. Many carriers are interested in transmitting electronic invoices to Defense Finance and Accounting Service — Indianapolis Center (DFAS-IN). This appendix includes a list of carrier representatives that either attended the first DFAS-IN EDI workshop for freight carriers on 24 March 1993 or called to express interest.

FREIGHT CARRIER EDI CONTACT LIST

Mr. Joe Brinson Ranger Transportation P.O. Box 19060 Jacksonville, FL 32245 (800) 872-9400

Mr. Dave Caplan Federa! Traffic Services P.O. Box 2424 LaPlata, MD 20646 (301) 870 3557

Mr. Jim Carter C. I. Whitten Transfer Co. P.O. Box 1833 Huntington, WV 25719 (800) 477-3414

Ms. Judy Cash Union Pacific Railroad 210 N. 13th St. Room 664 St. Louis, MO 63106 (314) 992-2000

Mr. Eric Clodfelter Old Dominion Freight Line P.O. Box 2006 High Point, NC 27261 (800) 432-6335 X350

Mr. Glen Coffey Bennett Motor Express 2220 S. Yellow Springs Rd. Springfield, OH 45506 (513) 323-4499

Ms. Donna Combs Roadway Express, Inc. P.O. Box 3552 Akron, OH 44309 (216) 258-6027 Ms. Sandra Cool Roadway Express, Inc. P.O. Box 3552 Akron, OH 44309 (216) 258-6027

Ms. Lisa Coy Ligon Nationwide 2911A Anton Rd. Madisonville, KY 42431 (502) 821-4141

Ms. Julie Deakins American Freightways P.O. Box 840 Harrison, AR 72602 (800) 874-4723

Ms. Regina DeBaker Watkins Motor Lines P.O. Box 95022 Lakeland, FL 33805 (800) 284-4544

Ms. Tina DeGarmo Independent Freightway P. O. Box 7013 Rockford, IL 61125-7013 (800) 435-3492

Mr. Robert Dugger Ligon Nationwide 2911A Anton Rd. Madisonville, KY 42431 (502) 821-4141

Gen. Charles Edmiston Land Star System, Inc. 6225 Brandon Ave. Suite 320 Springfield, VA 22150 (800) 443-6808 Mr. Don Fey Mercer Transportation P.O. Box 35610 Louisville, KY 40232 (800) 643-0424

Ms. Vanessa A. Finney CSX Transportation 6737 Southpoint Dr. SCJ602 Jacksonville, FL 32216 (904) 279-6697 (904) 279-5330

Mr. Carl Fisher Schneider National, Inc. P.O. Box 2545 Green Bay, WI 54306 (414) 592-2006

Mr. Joel Gilbert Ligon Nationwide 2911A Anton Rd. Madisonville, KY 42431 (502) 821-4141

Ms. Carol Giles American Road Lines 238 Moon Clinton Road Moon Township, PA 15108 (800) 525-2373

Mr. Fred A. Gowan Matson Intermodal System 333 Market Street P.O. Box 7452 San Francisco, CA 94120 (800) 367-7499

Ms. Donna Gratzer Yellow Freight System P.O. Box 7270 Overland Park, KS 66207 (913) 344-3670

Mr. Doug Gust NW Transportation P.O. Box 5001 Commerce City, CO 80037 (303) 289-3511 Ms. Mary Hicks American Freightways P.O. Box 840 Harrison, AR 72602 (800) 874-4723

Mr. John Higby Land Star System, Inc. 6225 Brandon Ave. Suite 320 Springfield, VA 22150 (800) 443-6808

Mr. Jeff Howard Mercer Transportation P.O. Box 35610 Louisville, KY 40232 (800) 626-5375

Mr. Rob Joles Roadway Express, Inc. P.O. Box 3552 Akron, OH 44309 (216) 258-6027

Mr. Larry Jones Tri-State Motor Transit P.O. Box 113 Joplin, MO 64802 (800) 234-8768

Mr. Hay Kirk J. B. Hunt 615 J. B. Hunt Corp. Dr. Lowell, AR 72745 (501) 820-0000

Mr. Jim Kopa Emery Worldwide Keystone Industrial Park Scranton, PA 18501 (717) 696-3440

Mr. Bill Lohse ABF Freight System, Inc. 100 South 10th St. Ft. Smith, AR 72903 (501) 784-8400 Mr. Woody Lovelace Carolina Freight Carriers P.O. Box 1400 Cherryville, NC 28021 (704) 435-5801

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Mr. Terry Lynn American Road Lines 238 Moon Clinton Road Moon Township, PA 15108 (800) 525-2373

Mr. Paul McTeek Ligon Nationwide 2911A Anton Rd. Madisonville, KY 42431 (502) 821-4141

Mr. Mike McVeigh Emery Worldwide Keystone Industrial Park Scranton, PA 18501 (717) 696-3440

Mr. Ben Milbrandt Consolidated Freightways P.O. Box 4845 Portland, OR 97208 (503) 499-3618

Ms. Chris Montavon Independent Freightway P.O. Box 7013 Rockford, IL 61125-7013 (800) 435-3492

Mr. Jeff Musoff Allstates Air Cargo P.O. Box 494 Elizabeth, NJ 07207 (201) 824-5300

Mr. Phil Nelson Tri-State Motor Transit P.O. Box 113 Joplin, MO 64802 (800) 234-8768 Mr. Doug Owens Ralph Owens & Miller Trucking P.O. Box 162419 Ft. Worth, TX 76161-2419 (800) 692-4010

Mr. Perry Reece Old Dominion Freight Line P.O. Box 2006 High Point, NC 27261 (800) 432-6335 X350

Mr. David Reynolds Motor Transport Service P.O. Box 9152 Richmond, VA 23227 (804) 798-9097

Mr. Doug Rice Mayflower Transit P.O. Box 107 Indianapolis, IN 46206 (317) 875-1571

Mr. Steve Richardson Tri-State Motor Transit P.O. Box 113 Joplin, MO 64802 (800) 234-8768

Ms. Kathy Ritts Merchants Truck Line P.O. Box 908 New Albany, MS 38652 (601) 534-7655

Ms. Terri Romick Yellow Freight System P.O. Box 7270 Overland Park, KS 66207 (913) 344-3670

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Ms. Kathy Swann Preston Trucking 151 Easton Blvd. Preston, MD 21655 (301) 673-7151

Mr. Tom Swartz Overnite Transportation 6571 Washington Blvd. Baltimore, MD 21227 (410) 796-8550 Ms. Stacey Thomas Mercer Transportation P.O. Box 35610 Louisville, KY 40232 (800) 643-0424

Mr. Tony Van Bokkem Hover Trucking Co. 1415 S. Olive South Bend, IN 46619 (219) 282-4500

Ms. Mary Youmans Independent Freightways P.O. Box 7013 Rockford, IL 61125-7013 (800) 435-3492

REPORT DOCUMENTATION PAGE

Form Approved OPM No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources gathering, and maintaining the data needed, and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

1. AGENCY USE ONLY (Leave Blank) 2. REPORT DATE 3. REPORT TYPE AND DATES COVER				DATES COVERED
	Jul 93		Final	
4. TITLE AND SUBTITLE			5 6	UNDING NUMBERS
Promoting Freight Carrier EDI Pa	C MDA903-90-C-0006			
Service - Indianapolis Center		PE 0902198D		
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6. AUTHOR(S)				Ì
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Logistics Management Institute			l ·	REPORT NUMBER
6400 Goldsboro Road Bethesda, MD 20817-5886			ļ ī	LMI-DF101RD1
Detnesda, WD 20017-3000				•
9. SPONSORING/MONITORING AGE Chief RPTA Division	NCY NAME(S) AND ADDRESS(ES)	10.	SPONSORING/MONITORING AGENCY REPORT NUMBER
Defense Finance and Accounting	Service – Indianapolis Center			ţ
Information Systems Directorate, Fort Harrison, IN 46249-0901	Building 1			Į
For traffison, 110 40245-0501		· 		
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY S	TATEMENT		121	o. DISTRIBUTION CODE
A: Approved for public release;	distribution unlimited			
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13. ABSTRACT (Maximum 200 word	-	anter (DEAS.IN)	is proporing to receive	e invoice information electronically
from freight carriers. The success of				
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14. SUBJECT TERMS		EDI; electronic data interchange; transportation; electronic invoicing		
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	transportation; electronic invo		TY CLASSIFICATION	32